Planetary Science Decadal Survey Whitepaper

Mars Science Helicopter
Compelling Science Enabled by an Aerial Platform

Jet Propulsion Laboratory, California Institute of Technology

Revolutionizing Mars Exploration with Rotorcraft

- Mars Helicopter Technology Demo aboard Perseverance Rover will demonstrate flight at Mars next year
- Dragonfly at Titan in 2030s

Rotorcraft enable science impossible from orbit and inaccessible to landers and rovers

MSH Vehicle Capabilities:
- Range (2–10 km/sol)
- Extreme terrain access and traversability (cliffs, skylights, sand dunes)
- Atmosphere (1 km+ altitude)
- Payload Capability (1–5 kg)

*Exact capabilities depend on vehicle and tradeoffs

Compelling Mars Science
High-priority questions and investigation resources:

Community
- Planetary Science Decadal Survey
- MEPAG Goals
- JPL A-Team Study

Seeking Co-Signatories!
jonathan.bapst@jpl.nasa.gov

Hyperlinks

Seeking Co-Signatories! (Google Doc)
MSH MEPAG 1-Pager (MEPAG Site)
jonathan.bapst@jpl.nasa.gov (Email)